

**NEW SOURCE CONSTRUCTION PERMIT  
and MINOR SOURCE OPERATING PERMIT**

**OFFICE OF AIR MANAGEMENT  
and  
VIGO COUNTY AIR POLLUTION CONTROL**

**Green Valley Argi Project  
4004 West Concannon Ave.  
West Terre Haute, Indiana 47885**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: 167-12380-00124	
Issued by: George M. Needham, Director Vigo County Air Pollution Control	Issuance Date:  March 19, 2001

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and Vigo County Air Pollution Control (VCAPC). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary cogeneration plant utilizing methane gas from abandoned coal mines.

Authorized Individual: Mr. Eric Emrick  
Source Address: 4004 West Concannon Ave., West Terre Haute, Indiana 47885  
Mailing Address: 4004 West Concannon Ave., West Terre Haute, Indiana 47885  
Phone Number: (812) 236-4451  
SIC Code: 4931  
County Location: Vigo County  
County Status: Maintenance Attainment area for SO<sub>2</sub>  
Attainment area for all other criteria pollutants  
Source Status: Part 70 Permit Program  
Minor Source, under PSD Rules

### A.2 Emissions units and Pollution Control Equipment Summary

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This stationary source is approved to construct and operate the following emissions units and pollution control devices:

Seven (7) Caterpillar G3516LE coal bed gas fired engines/generator sets, identified as Unit #1 through Unit #7 respectively, with a maximum capacity of 1085 bhp (also equivalent to 7.6 million BTU per hour of heat input and 765 kW output), utilizing no control, and exhausting to stacks #1 through #7 respectively.

### A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## **SECTION B GENERAL CONSTRUCTION CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

### **B.1 Permit No Defense [IC 13]**

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2 Definitions**

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

### **B.3 Effective Date of the Permit [IC13-15-5-3]**

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

### **B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]**

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### **B.5 Modification to Permit [326 IAC 2]**

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

### **B.6 Minor Source Operating Permit [326 IAC 2-6.1]**

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to Vigo County Air Pollution Control (VCAPC) and the Office of Air Management (OAM), Permit Administration & Development Section.
  - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM and VCAPC.
  - (2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Director of Vigo County Air Pollution Control prior to beginning operation of the facilities.
- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Director of Vigo County Air Pollution Control (VCAPC), the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to

326 IAC 2-7-19 (Fees).

- (e) Pursuant to 326 IAC 2-7-4(a)(1)(A)(ii) and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit within twelve (12) months of the date on which the source first meets an applicability criterion of 326 IAC 2-7-2.

**B.7 Local Agency Requirement**

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This permit shall also be considered to be the local permit, a separate application and approval is not required.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source
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### C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of NO<sub>x</sub> is limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM and VCAPC prior to making the change.

### C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM and VCAPC, upon request and shall be subject to review and approval by IDEM, OAM and VCAPC. IDEM, OAM and VCAPC, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

### C.3 Source Modification [326 IAC 2-7-10.5]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-10.5 whenever the Permittee seeks to construct new emissions units, modify existing emissions units, or otherwise modify the source.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, VCAPC, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch and VCAPC, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAM and VCAPC, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent

reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM and VCAPC, the fact that continuance of this permit is not consistent with purposes of this article.

#### C.7 Opacity [326 IAC 5-1]

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.8 Fugitive Dust Emissions [326 IAC 6-4]

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The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

### Testing Requirements

#### C.9 Performance Testing [326 IAC 3-6]

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- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

no later than thirty-five (35) days prior to the intended test date. The Permittee shall



submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM and VCAPC within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM and VCAPC, if the source submits to IDEM, OAM and VCAPC, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

### **Compliance Monitoring Requirements**

#### **C.10 Compliance Monitoring [326 IAC 2-1.1-11]**

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

#### **C.11 Monitoring Methods [326 IAC 3]**

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

#### **C.12 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]**

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM and VCAPC upon request and shall be subject to review and approval by IDEM, OAM and VCAPC. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

**C.13 Actions Related to Noncompliance Demonstrated by a Stack Test**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM and VCAPC, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM and VCAPC shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM and VCAPC within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM and VCAPC reserve the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM and VCAPC that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM and VCAPC may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

## Record Keeping and Reporting Requirements

### C.14 Malfunctions Report [326 IAC 1-6-2]

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Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM), Vigo County Air Pollution Control (VCAPC), or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM and VCAPC, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

### C.15 Annual Emission Statement [326 IAC 2-6]

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- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
  - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
  - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM and VCAPC, on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.16 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM and VCAPC may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM and VCAPC representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or VCAPC makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or VCAPC within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;

- (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-Annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM and VCAPC, on or before the date it is due.

- (d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
  - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) A malfunction as described in 326 IAC 1-6-2; or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.19 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management  
Indiana Department of Environmental Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM and VCAPC, on or before the date it is due.

## **SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS**

### **Facility Description [326 IAC 2-7-5(15)]**

Seven (7) Caterpillar G3516LE coal bed gas fired engines/generator sets, identified as Unit #1 through Unit #7 respectively, with a maximum capacity of 1085 bhp (also equivalent to 7.6 million BTU per hour of heat input and 765 kW output), utilizing no control, and exhausting to stacks #1 through #7 respectively.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### **Emission Limitations and Standards**

#### **D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]**

The input of coal bed gas to the engine/generator sets shall be at a rate equal to 100% load. This limitation is required to limit the potential to emit of NOx to less than 250 tons per year because the emission rate increases when the load drops off from 100%. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

#### **D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]**

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these emission units.

### **Compliance Determination Requirements**

#### **D.1.3 Testing Requirements [326 IAC 3-6]**

During the period between 0 and 6 months after installation of the first engine/generator set, the Permittee shall perform NOx and CO testing utilizing methods as approved by the Commissioner on at least one of the seven units. This testing is intended to verify that the NOx and CO potential emissions are below 250 tons per year. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM and VCAPC may require compliance testing when necessary to determine if the emissions unit is in compliance.

### **Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [ 326 IAC 2-6.1-5(a)(2)]**

#### **D.1.4 Monitoring**

- (a) Daily observations of the equipment input and output shall be performed on each engine/generator set that is in operation that day to ensure they are operating at 100% load. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Quarterly inspections shall be performed of each engine/generator set to ensure that there are no operational problems, including a verification that the switch gear has not been changed or altered from the proposed configuration. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this



permit.

- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

**Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [ 326 IAC 2-6.1-5(a)(2)]**

**D.1.5 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.1 and D.1.5, the Permittee shall maintain a log of the daily observations and quarterly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**and  
VIGO COUNTY AIR POLLUTION CONTROL**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	<b>Green Valley Argi Project</b>
<b>Address:</b>	<b>4004 West Concannon Ave.</b>
<b>City:</b>	<b>West Terre Haute</b>
<b>Phone #:</b>	<b>(812) 236-4451</b>
<b>MSOP #:</b>	<b>167-12380-00124</b>

I hereby certify that Green Valley Argi Project is ☒ still in operation.  
☐ no longer in operation.

I hereby certify that Green Valley Argi Project is:  
☒ in compliance with the requirements of MSOP **167-12380-00124**.  
☐ not in compliance with the requirements of MSOP **167-12380-00124**.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

**MALFUNCTION REPORT**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
FAX NUMBER - 317 233-5967**

**VIGO COUNTY AIR POLLUTION CONTROL  
FAX NUMBER - 812 462-3447**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ? \_\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ? \_\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES ? \_\_\_\_\_, 25 TONS/YEAR VOC ? \_\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ? \_\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ? \_\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ? \_\_\_\_\_, 25 TONS/YEAR FLUORIDES ? \_\_\_\_\_, 100 TONS/YEAR CARBON MONOXIDE ? \_\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ? \_\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ? \_\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ? \_\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ? \_\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?    Y        N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y        N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO<sub>2</sub>, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_  
INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

**the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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and  
**VIGO COUNTY AIR POLLUTION CONTROL**

**PART 70 OPERATING PERMIT  
SEMI-ANNUAL COMPLIANCE MONITORING REPORT**

Source Name: Green Valley Argi Project  
Source Address: 4004 West Concannon Ave., West Terre Haute, Indiana 47885  
Mailing Address: 4004 West Concannon Ave., West Terre Haute, Indiana 47885  
Permit No.: 167-12380-00124

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted semi-annually based on a calendar year. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

**9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.**

**9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.**

<b>Compliance Monitoring Requirement</b> (e.g. Permit Condition D.1.3)	<b>Number of Deviations</b>	<b>Date of each Deviation</b>

Form Completed By: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management  
Office of Air Management  
and  
Vigo County Air Pollution Control**

Technical Support Document (TSD) for a  
New Source Construction  
and Minor Source Operating Permit

**Source Background and Description**

**Source Name:** Green Valley Argi Project  
**Source Location:** 4004 West Concannon Ave., West Terre Haute, Indiana 47885  
**County:** Vigo County  
**SIC Code:** 4931  
**Operation Permit No.:** 167-12380-00124  
**Permit Reviewer:** Rob Harmon

Vigo County Air Pollution Control (VCAPC) has reviewed an application from Green Valley Argi Project relating to the construction and operation of a cogeneration plant utilizing methane gas from abandoned coal mines.

**Emission Units and Pollution Control Equipment**

The source will consist of the following emission units and pollution control devices:

Seven (7) Caterpillar G3516LE coal bed gas fired engines/generator sets, identified as Unit #1 through Unit #7 respectively, with a maximum capacity of 1085 bhp (also equivalent to 7.6 million BTU per hour of heat input and 765 kW output), utilizing no control, and exhausting to stacks #1 through #7 respectively.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)*	Temperature (°F)*
#1	Unit #1	14	0.67	5459	781
#2	Unit #2	14	0.67	5459	781
#3	Unit #3	14	0.67	5459	781
#4	Unit #4	14	0.67	5459	781
#5	Unit #5	14	0.67	5459	781
#6	Unit #6	14	0.67	5459	781
#7	Unit #7	14	0.67	5459	781

\* - indicates that those values are for maximum load.

**Enforcement Issue**

There are no enforcement actions pending.

**Recommendation**

The staff recommends to the Commissioner that the construction and operation be approved.

This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 9, 2000, with additional information received on June 29, 2000, July 3, 2000, July 5, 2000 and July 7, 2000.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations [page 1].

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	7.3
PM-10	7.3
SO <sub>2</sub>	neg
VOC	50.6
CO	124.7
NO <sub>x</sub>	308.1

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of NO<sub>x</sub> and CO are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The source is also subject to the requirements of 326 IAC 2-6.1 until the operation of the source becomes subject to 326 IAC 2-7.

### Actual Emissions

No previous emission data has been received from the source because it is a new source.

### County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	maintenance attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were

reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Vigo County has been classified as attainment or unclassifiable for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	7.3
PM10	7.3
SO <sub>2</sub>	neg
VOC	50.6
CO	124.7
NO <sub>x</sub>	146.7

- (a) This new source is **not** a major stationary source because it is not one of the 28 listed source categories, and it does not emit 250 tons per year or more of any regulated pollutant after limitations. Therefore, pursuant to 326 IAC 2-2 and 2-3, and 40 CFR 52.21, the PSD and Emission Offset requirements do not apply.
- (b) This determination was made utilizing after operational limitation numbers since the operational limitations will be required at all times. Since the emissions after these controls are below the thresholds for PSD Major status, no additional limitations were required to make this a PSD minor source. In this case the limitation is operation of the equipment at 100% load.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) at least one of the criteria pollutant is greater than or equal to 100 tons per year,

As a new source subject to the Part 70 provisions, this MSOP is being issued as a construction and initial operation permit pursuant to the transition requirements under 326 IAC 2-6.1-4. This MSOP will simply be a placeholder permit until the Part 70 operating permit is applied for and issued.

This new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.



## **State Rule Applicability - Entire Source**

### **326 IAC 2-2 (Prevention of Significant Deterioration)**

This new source is **not** a major stationary source because it is not one of the 28 listed source categories, and it does not emit 250 tons per year or more of any regulated pollutant after limitations. Therefore, pursuant to 326 IAC 2-2 and 2-3, and 40 CFR 52.21, the PSD and Emission Offset requirements do not apply.

### **326 IAC 2-6 (Emission Reporting)**

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred tons per year of NOx and CO. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

### **326 IAC 5-1 (Visible Emissions Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

There are not any applicable NOx or CO requirements for this source.

### **Operational Limitations**

Based on the emission data provided by the equipment manufacturer the emission rate of NOx is higher when the equipment is operated at a load below 100%. The calculations at 75% indicated the PTE would have been above 250 tons per year and therefore would have required a PSD Permit (See TSD Appendix A for detailed calculations). However, the company has requested that they be limited to only operate each piece of equipment at 100% load in order to reduce the expected combined PTE of the seven engine/generator sets to below that threshold. Since this limitation is based on manufacturer data, and also because the limitation is attempting to take advantage of more efficient equipment operation at a higher load, an initial stack test has been required in order to try to verify the emission rates. The future testing requirement is included in order to be sure the equipment does not deteriorate and lose that extra efficiency over time.

## **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM and VCAPC, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as

grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The engine/generator sets have applicable compliance monitoring conditions as specified below:
  - (a) Daily observations of the engine/generator set to ensure that they are operating at full load as required.
  - (b) Quarterly inspections of each engine/generator set to ensure that there are no operational problems, including verification that the switch gear has not been changed or altered from the proposed configuration.

These monitoring conditions are necessary because without the operational limitations the project would have been subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration).

### **Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Vigo County Air Pollution Control (VCAPC) and Office of Air Management (OAM) Construction Permit Application Form Y.

None of the listed air toxics will be emitted from this source.

### **Conclusion**

The construction and operation of this steel processing equipment shall be subject to the conditions of the attached proposed **New Source Construction and Minor Source Operating Permit 167-12380-00124**.

**Green Valley Argi Project**  
**4004 West Concannon Ave, West Terre Haute, Indiana, 47885**  
**167-12380-00124**  
**Application Received: June 9, 2000**  
**Reviewed by: Rob Harmon - VCAPC**

Cogeneration plant utilizing methane gas from abandoned coal mines.  
 Seven (7) identical units (Reciprocating Internal Combustion Engines)

Each Unit is rated at:

1085 maximum bhp

7.6 MMBTU/Hr

Emission Factor	Pollutant					
	PM	PM10	SO2	NOx*	VOC*	CO*
Emission Factor	0.1	0.1	negligible	4558.4	748.7	1844.5
Potential Emission in tons/yr per unit	1.0	1.0	negligible	44.0	7.2	17.8
Potential Emission in tons/yr all 7 units combined	7.3	7.3	negligible	308.1	50.6	124.7

\* indicates the emission factor was taken from manufacturer supplied emissions data and is reported in gram per hr (see the detailed information below). The emission factors are the highest emission rate provided. For VOC and CO this occurs at 100% load, while for NOx it occurs at 75% load.

Manufacturer provided emissions information:					
Load	bhp	NOx rate	Emission Rates		Units
			CO rate	VOC rate	
100%	1085	2.0 2170.0	1.7 1844.5	0.69 748.7	g/bhp-hr g/hr*
75%	814	5.6 4558.4	1.8 1465.2	0.53 431.4	g/bhp-hr g/hr*
50%	542	8.0 4336.0	1.8 975.6	0.56 303.5	g/bhp-hr g/hr*

\* indicates the calculated rate utilizing the presented emission rate in g/bhp-hr and the associated bhp for that respective load.

The NOx Potential at 100% Load is only:

2170      grams per hour  
 21.0      tons per year for each unit  
 146.7      tons per year for all 7 units combined